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EXAMINER

PAPE, ZACHARY

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,245

Applicant(s)

STROBEL, LARRY A.

Examiner

Zachary M. Pape

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The following detailed action is in response to the correspondence filed 12/20/2005.

The 35 U.S.C 112 2nd paragraph rejection to claims 24-27 have been withdrawn in view of the newly amended claims.

Drawings

1. The drawings are objected to because Fig 7 illustrates the output vent as being element number 120, when according to the specification (See Page 11) the output vent is element 201. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the

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examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

The drawings show element 119 which is not described in the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 6-7, 9, 10, 12-14, 16, 18, 20, and 24-25, 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al. (US 4,352,274).

With respect to claim 1, Anderson et al. teaches a computer system comprising: a cabinet (402) having a closure configured to be substantially airtight when closed; a personal computer (Comprising the CPU, motherboard, and other circuit boards) positioned within the cabinet (Via the card cage (416, 417, 419, 423) a gasket (561) positioned in a space between an inner surface of the cabinet (Adjacent 562) and an outer surface of the personal computer configured to prevent passage of air through the space between the personal computer and the inner surface of the cabinet between a

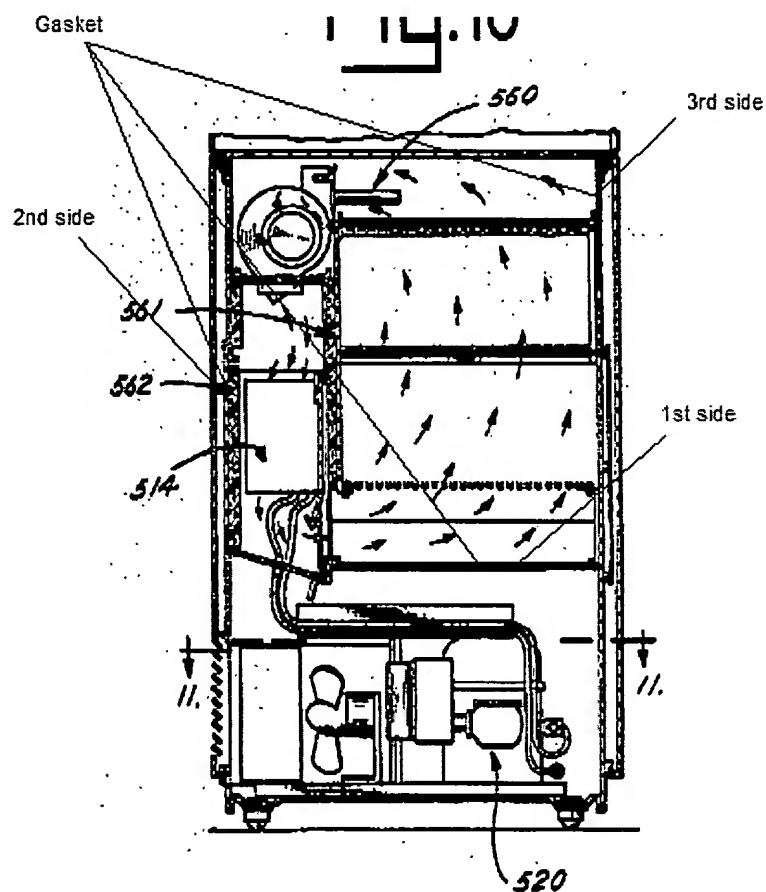
first region and a second region (The gasket (561) prevent the warm hot air of the first region from entering the second region (Where the PC is located)); and a cooling unit (514) positioned within the cabinet, the cooling unit configured to draw air from the first region of the cabinet (Between the fan and the evaporator), cool the air and output the air into the second region of the cabinet (Where the PC is located).

With respect to claim 5, Anderson et al. further teaches a jump cable (570) coupled at a first end to a port of the computer, and coupled at a second end to a port in a wall of the cabinet.

With respect to claim 6, Anderson et al. further teaches an environmental control unit for a personal computer comprising: an enclosure (402) configured to substantially enclose the computer, means (561) for preventing circulation of air within the enclosure and around an exterior of a case (Comprising 416, 417, 419) of the personal computer between a first region (Defined as being between the fan and the evaporator (514)) of the enclosure and a second region (Defined as being the space occupied by the computer (Comprising the CPU, motherboard, and other circuit cards)) of the enclosure, and an air conditioning unit (514) configured to draw air into the unit (As shown by the arrows in the first region), cool the air to within a selected range of temperatures, and blow the air into the enclosure (As indicated by the arrows).

With respect to claim 7, Anderson et al. further teaches that the air conditioning unit (514) is configured to draw air from the first region of the enclosure and blow the air into the second region of the enclosure (Via fan 510, 512).

With respect to claim 9, Anderson et al. further teaches a gasket (See present office action Fig 1 below) configured to substantially seal a space between an interior of surface of the enclosure and the exterior of the personal computer case, on three sides of the case.



With respect to claim 12, Anderson et al. further teaches a port (413) for access to a front side of the personal computer case.

With respect to claim 13, Anderson et al. further teaches an aperture (574) in a wall of the enclosure for passage of cables (As illustrated in Fig 14).

With respect to claim 14, Anderson et al. further teaches a cable port (574) located in a wall of the enclosure and configured to receive a jump cable (570, 576) for coupling the cable port to a service port of the computer, the cable port comprising a jump port configured to receive a service connection (As illustrated in Fig 14).

With respect to claim 16, Anderson et al. teaches a thermostat configured to control operation of the air conditioning unit according to a level of the temperature of the air in the enclosure (Column 4, Lines 43-49).

With respect to claim 18, Anderson et al. further teaches that the personal computer is separately encased in a tower case (Comprising 416, 417, 419, 423).

With respect to claim 20, Anderson et al. teaches a personal computer, comprising: a chassis (Comprising 416, 417, 419) of the personal computer (Shown in Fig 2) configured to receive computer components (433); a case (402) configured to be coupled to the chassis in a substantially airtight seal and enclose the components; and a refrigeration unit (520) coupled to the chassis (As illustrated in Fig 8 of Anderson) configured to draw air from a first region within the cover, cool the air to within a selected temperature range, and output the cooled air into a second region within the cover (As illustrated in Fig 10, the refrigeration unit takes air from an area above the evaporator (514) and blows it into a second area near sensor (560) all within the cover).

With respect to claim 24, Anderson et al. teaches a method of cooling a personal computer positioned within an enclosure, comprising: drawing air into a cooling unit (514) coupled to an enclosure (402) of the personal computer; cooling the air, blowing the air from the cooling unit to a first region (Just after the evaporator) within the

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enclosure, while preventing the air from circulating to a second region within the enclosure without passing through the personal computer (Element 561 and the walls below 514 keep the air from moving anywhere but through the case and then into the second region), moving the air from the first region into a case of the personal computer (The personal computer comprises the CPU, circuit boards and the motherboard all housed adjacent to the evaporator (514) for cooling) positioned within the enclosure (402); transferring heat from components (Circuit boards, motherboard, and CPU) within the personal computer case to the air; and moving the air from the personal computer case to a second region within the enclosure (Near the sensor 560).

With respect to claim 25, Anderson et al. further teaches that drawing air into the cooling unit step comprises; drawing air from the second region (Near 560) into the cooling unit (514).

With respect to claim 27, Anderson et al. further teaches that the step of moving the air includes: Blowing the air with a fan (510, 512) at an exhaust location in the personal computer case to remove air from the personal computer (Air enters into the personal computer at the bottom shortly after the evaporator (514) and exits the personal computer at the exhaust location located at the top of the personal computer near sensor (560)).

With respect to claim 28, Anderson et al. further teaches a gasket (561) configured to substantially seal a space between an interior surface of the enclosure and the exterior of the personal computer case, on at least one side of the case (The

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gasket 561 as illustrated in Fig 10, is located between the exterior of the computer case and the interior of the enclosure).

With respect to claims 10, 29-30, Anderson et al. further teaches an environmental control unit for a personal computer (Comprising of the elements shown in Figs 5-7) comprising: an enclosure (402) configured to substantially enclose the computer; and an air conditioning unit (Comprising 564) configured to: to selectively draw air into the unit from a first region (Near 560) of the enclosure, or draw air from a region of the exterior of the enclosure while air from the first region of the enclosure is vented to the exterior, cool the air (Via 514) to within a selected range of temperatures and blow the air into a second region (Just after the evaporator 514) of the enclosure.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al in view of Gianelo (US 6,589,308).

With respect to claim 15, Anderson fails to teach the use of a filter configured to remove contaminants from air drawn into the air conditioning unit. Gianelo teaches a computer cabinet utilizing a filter (30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cabinet filter of Gianelo

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with the PC cooling system of Anderson et al. to filter out harmful particles from the air circulation path (Gianelo: Column 4, Lines 37-51). Removing particles from the air would reduce the amount of dust and other particles within the system thus increasing the reliability of the computer system.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al.

With respect to claim 17, Anderson et al. fails to teach that the enclosure is configured to substantially enclose a plurality of personal computers. It would have been an obvious matter of design choice to extend the walls and door of the enclosure (of Anderson et al.) since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). Allowing more room for additional computers within the enclosure of Anderson et al. would reduce the overall cost to the user since the user would not have to buy a new enclosure for each unit.

Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (274) et al in view of Andersson et al. (Patent # 5,398,159).

With respect to claim 19, the combination of Anderson et al (274). meets the claim limitations expressed in claim 6 above, but fails to teach the use of a back-up ventilation system configured to operate in response to a failure of the air conditioning

unit. Andersson et al. (159) teaches the use of a back-up ventilation system configured to operate in response to a failure of the air conditioning unit. (Column 8, Lines 36-40) It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the backup ventilation system of Andersson et al. (159) with the air conditioning unit and cabinet of Anderson et al. (274) to permit continued operation of the computer equipment in the event that the air conditioning unit fails (Andersson (159); Column 8, Lines 38-40).

Claims 3-4, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (274) in view of Le et al. (US 5,038,308).

With respect to claims 3 and 21, Anderson et al. (274) further teaches that the computer further comprises a motherboard (431) and a power supply (563) but fails to teach the use of a hard drive coupled to the chassis. Le et al. teaches a computer (100) comprising a hard drive (178). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the hard drive of Le et al. with the computer cooling system of Anderson et al. to provide a means of storing data within the computer system. The ability to store information on a fixed hard disk drive allows the computer to operate more efficiently since a hard disk drive is able to hold larger quantities of information.

With respect to claim 4, Anderson et al. teaches the limitations of claim 1 above, but fails to specifically teach a video monitor coupled to the computer via a cable; and an opening in the cabinet for receiving the cable. Le et al. teaches that a cover

including a video port (164) and the system further comprises a video monitor (104) coupled to the video port (The video port and the video monitor must be connected via a cable to pass the information from the computer main system (102) to the video monitor (104)). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Le et al. with that of Anderson et al. to provide graphical interaction with the personal computer.

With respect to claim 22, Anderson et al. teaches the limitations of claim 20 above, but fails to teach that the computer system further comprises a disk drive which is configured to allow access from outside a computer cover. Le et al. further teaches a computer system further comprising a disk drive (182) which is configured to allow access from outside a computer cover (109; As illustrated in Fig 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Le et al. with that of Anderson et al. to provide additional input/output support to the computer of Anderson et al. A disk drive allows a user to, for example, access data stored on the computer or to further store additional data on the computer thus enhancing the usability of the computer.

With respect to claim 23, Anderson et al. teaches the limitations of claim 20 above, but fails to teach that the case includes a video port and the system further comprises a video monitor coupled to the video port. Le et al teaches that a case (102) includes a video port (164) and the system further comprises a video monitor (104) coupled to the video port (The video port and the video monitor must inherently be connected via a cable to pass the information from the computer main system (102) to

the video monitor (104)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Le et al. with that of Anderson et al. to provide graphical interaction with the personal computer.

Claims 11, 31 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. in view of Novotny (US 6,896,612).

With respect to claim 11, and 31, Anderson et al. teaches the limitations of claims 6 and 30 as taught above, and further teaches a means (560) for comparing the temperature of air in the first region of the enclosure with the temperature of air outside the enclosure, but fails to teach a control circuit to control the region from which the air is selected. Novotny teaches the a control circuit to control the region from which the air is selected (See Column 4 Line 66 – Column 5, Line 24 where Novotny teaches the louvers opening upon a signal to increase the pressure within the system based on a temperature detector 541). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Novotny with that of Anderson et al. to provide cooling to the system in the event that the dedicated cooling system fails (Novotny: Column 4, Line 66 – Column 5 Line 1).

With respect to claim 26, Anderson et al. teaches the limitations of claim 24 above, but fails to specifically teach exhausting the air outside the enclosure, and the drawing air into the cooling unit step comprises drawing air from outside the enclosure, into the cooling unit. Novotny teaches the conventionality of exhausting air outside an enclosure (Via louvers 509 as illustrated in Fig 5) and drawing air into the cooling unit

step comprises drawing air from outside the enclosure (Via louvers 508 as illustrated in Fig 5) into a cooling unit (515). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Novotny with that of Anderson et al. to provide cooling to the system in the event that the dedicated cooling system fails (Novotny: Column 4, Line 66 – Column 5 Line 1).

Response to Arguments

5. Applicant's arguments filed 12/20/2005 to claim 26 have been fully considered and are persuasive. As such the examiner has issued a new rejection on the merits as disclosed above.

Applicant's arguments filed 12/20/2005 to claims 1, 6, 20 and 24 have been fully considered but they are not persuasive.

With respect to the applicant's remarks to claims 1, 6, and 20 that, "one of ordinary skill would not consider the components cited by the Examiner as equivalent to a personal computer", the examiner respectfully disagrees. The examiner cites The American Heritage College Dictionary 4th edition which defines a personal computer as, "a computer built around a microprocessor for use by an individual" which is the case with the Anderson et al. reference (See Column 3, Lines 11-15 where Anderson recites, "The circuit boards which make up the central processing unit, the input/output channels, and a main memory of substantial capacity are advantageously housed together in a CPU cabinet whose exterior appearance is depicted in Fig. 1.").

With respect to the applicant's remarks to claim 1 that, "there is no indication that there is anything to prevent air from passing through the space between the cage and the cabinet", the examiner respectfully disagrees. As illustrated in Fig 10, the cold air is circulated within the enclosure in a counterclockwise manner starting, for example at the fan, passing through the cooling unit (514) and into the first portion (Near 514), past the personal computer, and into the second portion (near 56) and back to the fan. The gasket (561) which is located between an interior of the enclosure and the exterior of the personal computer is intended to block airflow and temperatures from entering the personal computer area (see Column 4, Lines 49-52) and for at least this reason the gasket (561) "is configured to substantially seal a space between an interior surface of the enclosure and the exterior of the personal computer case".

With respect to the applicant's remarks to claim 24 that, "Anderson fails to anticipate the method of cooling a person computer as recited in claim 24", the examiner respectfully disagrees. As recited in the rejection to claim 24 above and as reiterated herein, the system of Anderson et al. is only capable of blowing air to a first region within the enclosure, while preventing the air from circulating to a second region within the enclosure without passing through the personal computer since the airflow is in a counterclockwise loop (As illustrated in Fig 10) where the air flows from the fan, past the cooling unit (514) into the personal computer and back to the fan. Fig 10 clearly illustrates that the only way the air is able to pass from the first region (near 514) to the second region (near 560) is to pass through the personal computer between the two.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


US 6,628,520; US 5,706,668; US 20050185377 all further teach cooling computers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP


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